S/124/61/000/009/027/058
D234/D303

AUTHORS: Shmatkov, V.A. and Chirkov, A.A.

TITLE: On the problem of experimental and theoretical determination of rigidity in pure torsion of rods, whose cross-section has the form of a part of a circular ring

PERIODICAL: Referativnyy zhurnal Mekhanika, no. 9, 1961, 6, abstract 9 V51 (Izv. vyssh. uchebn. zavedeniy. Stroyo i arkhitekt., 1960, no. 4, 19-25)

TEXT: A description of the experimental determination of the rigidity in pure torsion of rods, whose cross-section has the form of a part of a circular ring. The authors concluded that in this case it is convenient to use Timoshenko's formula (Teoriya uprugosti (Theory of Elasticity), M.-L., ONTI, 1937):

$$I_d = \frac{\delta^4}{3}\left(\frac{1}{\delta} - 0.630\right)$$

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On the problem of experimental...

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introducing in it a correction factor K = 0.960 obtained by them. Four specimens, with central angles of the cross-section of 30°, 60°, 90° and 120° were tested. [Abstracter's note: Complete translation]

Card 2/2

CHIRKOV, A.A., doktor tekhn nauk, prof.

Compsite two-cycle piston-turbine unit designed by G.Junger.
Izv.vys.ucheb.zav.; mashinostr. no.4:10-19 '59. (MIRA 13:4)

1. Gor'kovskiy politekhnicheskiy institut.
(Gas and oil engines)

30250
S/145/60/000/002/019/020
D221/D302

26.2136

AUTHOR: Chirkov, A.A., Doctor of Technical Sciences, Professor

TITLE: On reducing temperature of jet pipes in gas turbines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 2, 1960, 196 - 207

TEXT: The author attempts to give a theoretical explanation of temperatures of jet pipes cooled by working air. To simplify the problem, it is assumed that the whole air in the combustion chamber is of primary origin, and flows in opposite direction to the nozzle (Fig. 1). After mathematical elaboration, a deduction is made that the hottest part is section II. Maximum temperature there is increased with higher values of nozzle temperature, as well as T_1, Q_n^p, q_f and ε_w. It drops with the increase of L_g, B_h, q_v and α_w. For reducing the temperature of wall T_w, it is expedient to operate with large B_h, i.e. to have a minimum number of chambers. However, this can be solved in conjunction by regulation of the gas turbine at variable load conditions. Therefore, the majority of

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On reducing temperature of jet ...

factors acting on T_w are determined by external causes, and the designer is left with two elements: α_w and ε_w (coefficients of excess air and radiation respectively). Consideration is then given to a specific combustion chamber as an example. When determining losses use was made of a Blasius equation. Results were plotted illustrating changes of wall temperature as a function of α_w and ε_w. Intensification of heat transfer also can be achieved by ribbing the jet pipe alongside the air flow. The criterion $Ri = \lambda_p/\alpha_p l$ characterizes the reduction of temperature difference between the heat carrier and the wall, where λ_p is the coefficient of heat conduction of metal rib, α_p is the coefficient of heat transfer in the clearance between ribs, and l is the length of rib. Tabulated data are used for calculations. The coefficient of heat transfer in clearance between ribs is calculated by

$$Nu_l = 0.018\ Re_f^{0.8} \qquad (26)$$

The analysis confirms the significant advantage of tube ribbing. Consideration is then given to operation of the chamber in condi-

tions that differ from the nominal state. When load is reduced to 1/4, then the temperature of air and the wall will exceed the limits allowed. Consequently special regulation of chamber work in the case of high temperature gas turbines should be envisaged. The multi-chamber design is difficult, whereas the use of a single chamber unit and load decrease by fuel feed results in drop of nozzle temperature, due to less acute lowering of air supply. One of the important points to note is the possibility of using metal with a low coefficient of radiation (ε_w = 0.2 - 0.3), by applying chromium, aluminum or zinc over the inside surface of jet pipes. The ribbing as well as duction of blackness form the most simple way to solve the question of high-temperature combustion chambers. There are 2 figures, 2 tables and 4 Soviet-bloc references.

ASSOCIATION: Yaroslavskiy tekhnologicheskiy institut (Yaroslavl Technological Institute)

SUBMITTED: December 15, 1959

Card 3/4 3

SHMATKOV, V.A.; CHIRKOV, A.A.

Pure torsion test for bars with a cross section in the form of a part of ring. Trudy NPI 91:77-82 '60. (MIRA 14:5)
(Girders)

CHIRKOV, A.A., doktor tekhn.nauk, prof.

New method for calculating thermal stresses of internal combustion engines. Vest.mashinostr. 42 no.11:16-22 N '62. (MIRA 15:11)
(Gas and oil engines) (Thermal stresses)

CHIRKOV, A.A.; GUROV, B.M.

Use of cast iron crushers for the calibration of piezoelectric pressure gauges. Trudy NPI 152:15-20 '63. (MIRA 17:4)

L 6670-65 EWT(m)/EWP(k) EWP(j)/EWP(b) Pf-4 ASD(f) JD/HW

ACCESSION NR: AR4036012 S/0276/64/000/003/V020/V020

SOURCE: Ref. zh. Tekhnol. mashinostr. Sv. t., Abs. 3V141

AUTHOR: Chirkov, A. A.

TITLE: On determining the plastic deformation in drawing a cylindrical socket with a shock wave occurring in a fluid

CITED SOURCE: Tr. Novocherk. politekhn. in-ta, v. 152, 1964, [illegible]

TOPIC TAGS: plastic deformation, shock wave metal testing

ABSTRACT: To determine the distribution of plastic deformation [illegible] contour of the axial section, cylindrical blanks of 08 steel 0.5 mm thick obtained by extrusion on a press were subjected to a shock wave. The shock wave in fluid was initiated along the axis of the blank and had a cylindrical symmetry. [illegible] were conducted on cylindrical and conical matrixes under the influence of a single powerful impulse or multiple weak impulses. It was determined that the plastic deformation was localized in the places where the sides of the socket touch the bottom plate and are propagated upward along the forming cylinder at [illegible] height cylinder, and at the center of the bottom plate, at [illegible]

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L 6870-65

ACCESSION NR: AR4036012

distribution is characteristic for the activity of single and multiple [illegible] -- does not depend on the form of the matrix.

SUB CODE: NP

Card 2/2

CHIRKOV, A.A., kapitan-leytenant

English-Russian dictionary on submarines and antisubmarine defense. Mor. sbor. 47 no.5:92-93 My '64. (MIRA 18:6)

VOYNICH , L.K.; GORELIK, Z.M.; ZHURAVLEV, V.N.; CHIRKOV, A.G.; BOL'SHAKOV, B.N., red. izd-va; UVAROVA, A.F., tekhn. red.

[Catalog of parts for MAZ-200 motortrucks, MAZ-200B saddle-type tractors, and MAZ-205 dump trucks] Katalog detalei gruzovogo avtomobilia MAZ-200, sedel'nogo tiagacha MAZ-200B i avtomobilia-samosvala MAZ-205. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 430 p. (MIRA 14:8)

1. Minskiy avtomobil'nyy zavod. 2. Rabotniki Otdela glavnogo konstruktora Minskogo avtomobil'nogo zavoda (for all except Bol'shakov, Uvarova)

(Motortrucks—Catalogs) (Dump trucks—Catalogs)

VOYNICH, L.K., inzh.; GORELIK, Z.M., inzh.; ZHURAVLEV, V.N., inzh.; CHIRKOV, A.G., inzh.; BOL'SHAKOV, B.N., red. izd-va; UVAROVA, A.F., tekhn. red.

[Catalog of parts for the MA2-501 logging tractor and the MA2-502 and MA2-502A motortrucks] Katalog detalei lesovoznogo tiagacha MAZ-501 i gruzovykh avtomobilei MAZ-502 i MAZ-502A. Moskva, Mashgiz, 1961. 447 p. (MIRA 15:3)

1. Minskiy avtomobil'nyy zavod. 2. Otdel glavnogo konstruktora Minskogo avtomobil'nogo zavoda (for Voynich, Gorelik, Zhuravlev, Chirkov).

(Motortrucks) (Tractors)

SANDLER, M.S.; CHIRKOV, A.I.; SIZOV, N.T.

Concerning A.B.Topolianskii's article "Problems of safety in electrical systems of the construction industry." Prom.energ. 19 no. 4:59-60 Ap '64. (MIRA 17:5)

1. Obukhovskiy domostroitel'nyy kombinat Glavnogo upravleniya po zhilishchnomu, grazhdanskomu i promyshlennomu stroitel'stvu Leningradskogo gorodskogo ispolnitel'nogo komiteta (for Sandler, Chirkov). 2. Noginskaya elektroset'Moskovskogo oblastnogo ekspluatatsionno-energeticheskogo upravleniya (for Sizov).

L 6[illegible]

ACCESSION NR: AP[illegible]

542.943:547.626 //

AUTHOR: Chirko, A. T.

TITLE: Products of [illegible]-phase autooxidation of dicyclohexyl

SOURCE: Zhurnal [illegible]eskoy khimii, v. 1, no. 6, 1965, 1[illegible]

TOPIC TAGS: [illegible]xidation, dicyclohexyl, naphthene hydrocarbon, [illegible] oxygen

ABSTRACT: [illegible] of bicyclic naphthene hydrocarbons was [illegible] to elucidate the mechanism of the autooxidative process. The w[illegible] of the investigation of W. Fritzkov and K. Gröbe (Ber., 93, [illegible], products of autoxidation of dicyclohexyl in a current of oxygen at atm[illegible] pressure and at 140C were mono- and dihydroperoxides of dicyclohexyl in [illegible] of 3:1. It is [illegible] that alcohols are the primary products [illegible] decomposition of hydroperoxides of dicyclohexyl. Physical properti[illegible] dicyclohexyl and of mono- and dihydroperoxides of dicyclohexyl are [illegible] reaction mechanism for the process is proposed. Orig. art. has [illegible]

Card 1/2

L [illegible]

ACCESSION NR: [illegible]

ASSOCIATION: [illegible] gosudarstvennyy universitet imeni [illegible]
(Belorussian State University)

SUBMITTED: [illegible] ENCL: 00

NO REF SOV: [illegible] OTHER: 009

Card 1/2

CHIRKOV, A.K.

56-4-38/54

AUTHORS: Chirkov, A.K., Matevosyan, R.O.

TITLE: Paramagnetic Resonance in New Organic Radicals (Paramagnitnyy rezonans v novykh organicheskikh radikalakh)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4, pp. 1053 - 1054 (USSR) (Letter to the Editor)

ABSTRACT: The influence of the exchanger X in the para-position of the α-phenyl ring on the exchange interaction in organic radicals is investigated. The shape of the paramagnetic resonance absorption represented by the ratio M_4/M_2 serves as measure for the exchange interaction. The measurement of the paramagnetic resonance absorption was made according to the grid current method by Zavoyskiy. The following measurement results were obtained:

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Paramagnetic Resonance in New Organic Radicals 56-4-38/54

exchanger X	g-factor	M_4/M_2	ΔH	A
H	2,0042± 0,0004	1,43 ± 0,02	1,00 ± 0,15	300
Cl	2,001 ± 0,001	1,42 ± 0,02	1,20 ± 0,15	290
Br	2,002 ± 0,002	1,40 ± 0,02	2,20 ± 0,15	170
OCH_3	2,000 ± 0,002	1,30 ± 0,02	2,6 ± 0,2	120
F	2,000 ± 0,004	weak	4,1 ± 0,5	20

There are 1 table and 1 Slavic reference.

ASSOCIATION: Ural Polytechnical Institute (Ural'skiy politekhnicheskiy institut)

SUBMITTED: July 1, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Chirkov, A. K., Kokin, A. A. SOV/56-35-1-6/59

TITLE: Paramagnetic Resonance in Weak Fields on Free Radicals (Paramagnitnyy rezonans v slabykh polyakh na svobodnykh radikalakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 1, pp 50 - 55 (USSR)

ABSTRACT: In the present paper the shape of the electron paramagnetic resonance absorption line of crystalline αα-diphenyl-β-picryl-hydrazil ($(C_6H_5)_2N\text{-}NC_6H_2(NO_2)_3$) is investigated at room temperature and weak fields. Already in earlier papers (Refs 1-4) the influence exercised by dipole-dipole interaction on the shape of the absorption line was investigated: Anderson and Weiss (Ref 5) investigated the equation of the absorption curve near its maximum, taking dipole-dipole as well as the ordinary Coulomb (Kulon) interaction into account. In reference 1 the quantum-mechanical theory of the shape of the line was developed. Theoretical reasoning in this paper is based upon reference 1. The experimental investigation was carried out by the generator method (block

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scheme Fig 1), where the sample is in a Helmholtz (Gel'mgol'ts) coil. The generator operated with 28 megacycles at ~ 400 mV, the main voltage at the generator showed changes of not more than 10 mV near the resonance. Figure 2 shows an oscillogram of a resonance pulse at H_0 = 10 Oe, H_0 = 1,76.10^8 c, ΔH = 0,85 ± 0,01 Oe (ΔH compared with Refs 7,9,10: ΔH = 0,87 and 0,88 Oe, respectively). There is good agreement with theory. For a number of new radicals the Curie (Kyuri) points are calculated asymptotically (e.g. Cl:3,8°K, Br:1,1°K, OCH_3:2,0°K and F:1,2°K). In conclusion the authors thank G.V.Skrotskiy for his discussions and advice, and R.O. Matevosyan for the preparation test radicals. There are 3 figures, 1 table, and 13 references, 2 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: February 19, 1958

AUTHOR: Chirkov, A.K.

TITLE: Measurement of Weak Magnetic Fields by Electron Spin Resonance Methods (Izmereniye slabykh magnitnykh poley metodom elektronnogo rezonansa)

SOV/120-59-2-10/50

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 2, pp 36-38 (USSR)

ABSTRACT: Diphenylpicrylhydrazyl (DPPH), α-(n-chlorophenyl)-α-phenyl-β-picryl-hydrazyl (PCPPH) and sodium in ammonia are tested for use in the range 0.4 to 21 oersted. The first derivative of the absorption line is recorded in the usual way with a narrow-band amplifier and phase-sensitive detector; fields below 3 oersted are best measured with sodium in ammonia at 20 °C, and fields above 3 oersted with the organic radicals. The system is that used by Kubarev (Ref 4), with changes confined largely to the simplifications consequent on the reduced size of sample needed for 3 oersted and above; the field is modulated with an amplitude of about 0.15 oersted (organic radical) or 0.01 oersted (with sodium in ammonia). The circuits are not given. The detectors have sensitive volumes of 0.2 cc (sodium in

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Measurement of Weak Magnetic Fields by Electron Spin Resonance Methods SOV/120-59-2-10/50

ammonia), 0.1 cc and 0.05 cc (DPPH). No other technical details are given.
There are 1 figure and 10 references, of which 4 are Soviet, 3 English, 1 Swiss, 1 Czech and 1 French.

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ASSOCIATION: Ural'skiy politekhnicheskiy institut (Urals Polytechnical Institute)

SUBMITTED: May 30, 1958

25(5,7)
AUTHORS: Tomashpol'skiy, I.A., and Chirov, A.K.

SOV/117-59-2-24/27

TITLE: On the Economic Effectiveness of Quick Milling (Ob ekonomicheskoy effektivnosti skorostnogo frezerovaniya)

PERIODICAL: Mashinostroitel', 1959, Nr 2, p 42 (USSR)

ABSTRACT: The Shtampomekhanicheskiy tsekh (Stampo-Mechanical Shop) of the Moskovskiy avtomobil'nyy zavod (Moscow Auto Plant) imeni Likhachev was preparing a considerable portion of steel cubes for forging stamps, not by planing them, but by quick-milling them on plano-milling machines. This had some advantages, but appeared to cost more, on account of the higher cost of the milling tool. A special test, which included consideration of all the factors involved, has shown, that the cubes processed by quick-milling cost less than those processed by planing.

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5 (3)

AUTHORS: Matevosyan, R. O., Postovskiy, I. Ya., Chirkov, A. K. SOV/79-29-3-23/61

TITLE: Investigations in the Field of Chemistry of Free Radicals in the Hydrazine Series (Issledovaniya v oblasti khimii svobodnykh radikalov gidrazinovogo ryada). I. Some Derivatives of α,α-Diphenyl-β-Picryl Hydrazyl (I. Nekotoryye proizvodnyye α,α-difenil-β-pikrilgidrazila)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 858-864 (USSR)

ABSTRACT: One of the physical methods of detecting the presence of the unpaired valence electron in free radicals is the method of electron paramagnetic resonance (Ref 1). In this way a number of stable hydrazine derivatives was investigated such as the α,α-diphenyl-β-picryl hydrazyl and similar hydrazyls (Refs 2-6). The application of this method permitted the investigations of the influence of various substituents in the free radical upon the unpaired electron. As initial product served the polyhalogen derivatives of α,α-diphenyl-β-picryl hydrazyl (I), with substituents X in the para position of the phenyl ring (II-IV):

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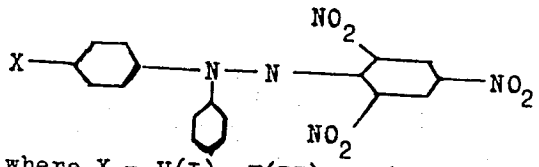
Investigations in the Field of Chemistry of Free Radicals in the Hydrazine Series. I. Some Derivatives of α,α-Diphenyl-β-Picryl Hydrazyl

SOV/79-29-3-23/61



where X = H(I); F(II); Cl(III); Br(IV). Two of these hydrazyls (II,III) are novel. The synthesis of these compounds was carried out according to the reaction scheme 1. The radical (IV) containing bromine, as well as the unsubstituted one were obtained according to Goldschmidt (Ref 7). The hydrazyls yield permanganate-colored chloroform solutions and readily crystallize as stable crystals of dark-violet color. By means of the above-mentioned method in the radicals obtained the exchange reactions of the unpaired electron, in dependence on the presence of one or another halogen in the para position of the phenyl radical were investigated. The determination was performed according to Zavoyskiy (Ref 8). It was found in this investigation that the highest exchange transpositions were shown by the unsubstituted hydrazyl (I), the lowest by the fluorine

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Investigations in the Field of Chemistry of Free Radicals in the Hydrazine Series. I. Some Derivatives of α,α-Diphenyl-β-Picryl Hydrazyl

derivative (II). The latter is indicative of a more considerable localization of the unpaired electron in this radical as compared with the unsubstituted radical. There are 2 figures, 6 tables, and 16 references, 4 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: January 23, 1958

5(3) SOV/79-29-9-64/76

AUTHORS: Postovskiy, I. Ya., Matevosyan, R. O., Chirkov, A. K.

TITLE: Investigation in the Field of the Chemistry of the Free Radicals of the Hydrazine Series. II. Synthesis and Properties of α-Biphenyl-α-phenyl-β-picryl-hydrazyl and Its Halogen Derivatives

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3106-3113 (USSR)

ABSTRACT: In continuation of the papers of references 1, 2 the authors try to explain the possible influence of the chlorine- and bromine atoms on the exchange interaction of the unpaired electron of the nitrogen atom if the halogen atom is in position 4 of the biphenyl ester of the radical (II). Compounds (IIa), (IIb), (IIv) were synthesized for this purpose. These free radicals hitherto not described in publications were obtained according to the above scheme. The new radicals are very stable compounds which do not change for months even in air. They crystallize from chloroform ether in the form of almost black prisms, they are, however, dark violet, in aromatic hydrocarbons and in chloroform. The radical (IIa) is obtained in two forms by the oxidation of the nonsubstituted picryl hydrazine (VIII). After the end of the oxidation first the

Investigation in the Field of the Chemistry of the Free Radicals of the Hydrazine Series. II. Synthesis and Properties of α-Biphenyl-α-phenyl-β-picryl-hydrazyl and Its Halogen Derivatives

radical (IIa) separates from the chloroform ether solution in prisms of almost black color (melting point 90-91°, yield 10-15%); after some hours a finely crystalline precipitate of brown color separates from the filtrate on standing at a low temperature (melting point 160-161°, yield 25-30%); it dissolves in chloroform ether with dark violet color. When vaporizing the solution, crystals of the radical with a melting point 90-91° are separated first; on standing at a low temperature the product with the melting point 160-161° again precipitates from the mother liquor. The black and brown product have the same empirical formulas. It was found by the method of paramagnetic resonance of electrons that the exchange interactions of the unpaired electron in the biphenyl radicals which are in crystalline state increase to a lesser degree in the transition from the nonsubstituted radical to the substituted one, than is the case with the corresponding phenyl radicals. It may be concluded therefrom that the biphenyl residue in the radicals (II) investigated

Investigation in the Field of the Chemistry of the Free Radicals of the Hydrazine Series. II. Synthesis and Properties of α-Biphenyl-α-phenyl-β-picryl-hydrazyl and Its Halogen Derivatives

transfers the influence of the halogen atoms to a lesser degree in the crystalline state than the phenyl in the radicals (I). On the basis of this method it was thus found that both products are free radicals; however, they have a different structure in the crystalline state since their ΔH are different. The measurement of paramagnetic resonance was made by A. K. Chirkov. There are 3 tables and 6 references, 4 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Urals Polytechnic Institute)

SUBMITTED: August 11, 1958

S/079/60/030/010/004/030
B001/B075

11/2122

AUTHORS: Matevosyan, R. O., Postovskiy, I. Ya., and Chirkov, A. K.

TITLE: Investigation in the Field of the Chemistry of Free Radicals of the Hydrazine Series. III. Synthesis and Properties of N-Carbazyl Picryl Nitrogen and Its Halogen Derivatives

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 10, pp. 3186-3193

TEXT: The spectrum of the hyperfine structure of electron paramagnetic resonance of the stable radical α,α-diphenyl-β-picryl hydrazyl (DPPH) (I) indicates that the unpaired electron on N^{β} does not react with the π-electrons of the picryl- and diphenyl amine residues (Ref. 1). According to Refs. 1-3, a substitution of the diphenyl amine residue in DPPH by the coplanar carbazyl residue leads to a considerable change of the spectrum of the hyperfine structure of e. p. r. . According to the data of Ref. 4, the electron cloud of the unpaired electron in this radical is also distributed among two nitrogen atoms. However, it is not uniformly distributed but shifted toward one of the nitrogen atoms. This highly interesting

84868

Investigation in the Field of the Chemistry of Free Radicals of the Hydrazine Series. III. Synthesis and Properties of N-Carbazyl Picryl Nitrogen and Its Halogen Derivatives

S/079/60/030/010/004/030
B001/B075

and rather stable radical has hitherto been investigated only little. The authors did not know its synthesis, and only its paramagnetic properties have been mentioned in publications. In order to determine the dependence of the free hydrazyl radicals upon their structure, the properties of the carbazyl radical and of its 3-chlorine and 3-bromine derivatives were investigated and compared with those of the corresponding diphenyl radicals (Refs. 5 and 6) (Table 1). The authors synthesized the following free radicals of the carbazyl series, which had hitherto not been described: N-(3-carbazyl chloride)-picryl nitrogen and N-(3-carbazyl bromide)-picryl nitrogen. By means of electron paramagnetic resonance it was found that in weak fields (ΔH_o = 20 oe), N-carbazyl-picryl nitrogen and its 3-chlorine and 3-bromine derivatives contained in crystalline samples interact less than α,α-diphenyl-β-picryl hydrazyl and its halogen derivatives. The authors discuss the constituting and spatial factors affecting the properties of carbazyl radicals. A reaction formula is given for the synthesis of N-carbazyl picryl nitrogen and its halogen derivatives. Two figures illustrate the results obtained, and Table 2 gives the constants of the compounds synthesized. There are 2 figures, 2 tables, and

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Investigation in the Field of the Chemistry of Free Radicals of the Hydrazine Series. III. Synthesis and Properties of N-Carbazyl Picryl Nitrogen and Its Halogen Derivatives

S/079/60/030/010/004/030
B001/B075

11 references: 4 Soviet, 5 US, 1 Swiss, and 1 German.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: August 13, 1959

Card 3/3

86914

S/056/60/039/005/031/051
B006/B077

24.7100 (1035, 1055, 1160)

AUTHORS: Chirkov, A. K., Kokin, A. A.

TITLE: The Shape of the Electron Resonance Line in a Particle System Possessing an Anisotropic g-Factor

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1381 - 1386

TEXT: The electron paramagnetic resonance lines of powders, glass, and solid and undercooled solutions showed, at sufficiently high frequencies, a remarkable distortion of the line shape caused by anisotropy of g-factor and hyperfine structure. The disturbance by the anisotropy of the g-factor is characterized by the line asymmetry which increases with increasing magnetic field; the distortions due to hyperfine structure are independent of the field strength (at sufficiently high values). The effect of anisotropy of the g-factor of randomly oriented particles on the shape of the resonance lines in glass and organic compounds has been investigated repeatedly, but only in the case of uniaxial anisotropy of the g-factor. The experimental investigations were chiefly limited

The Shape of the Electron Resonance Line in a Particle System Possessing an Anisotropic g-Factor

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to diphenylpicrylhydrazyl; dependency of the line shape on the anisotropy of the g-factor and temperature dependency of anisotropy have already been investigated for such single crystals and free radicals. In such complicated paramagnetic compounds it is assumed that the anisotropy is not uniaxial but triaxial and their line shape is much more complicated. The authors calculated the moments and shape of the lines for systems consisting of randomly oriented particles with a weak triaxial or uniaxial anisotropy. Thermal motion and interaction of the particles is neglected. The results obtained by numerical integration are illustrated in diagrams, and some values for powders, glass, and undercooled solutions are compared with experimental values. It can be proved that the absorption line width in the case of strong fields ($H_0 > 1000$ oe) is mainly determined by the anisotropy of the g-factor and has to be taken into consideration. This effect increases with a drop of temperature. There are 3 figures and 15 references: 4 Soviet, 2 French, 8 US, and 1 British.

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The Shape of the Electron Resonance Line in a Particle System Possessing an Anisotropic g-Factor

S/056/60/039/005/031/051
B006/B077

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: June 17, 1960

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38347

9.6130

S/058/62/000/005/048/119
A001/A101

AUTHORS: Ryzhkov, V. M., Chirkov, A. K.

TITLE: Measuring weak magnetic fields by the electronic paramagnetic resonance method

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 51, abstract 5V346 ("Tr. Ural'skogo politekhn. in-ta", 1961, no. III, 89-107)

TEXT: The problem of measuring weak magnetic fields by the electronic paramagnetic resonance method are considered in detail; this method makes it possible to conduct continuous measurements of a field, when paramagnetics with anomalously narrow absorption lines are used. The values 0.05 and 280 oersted are assumed as limits for employing the method. The fundamental diagram of electronic paramagnetic resonance magnetometer is described, and sensitivity of the method is estimated; it attains the values 2×10^{-5} - 8×10^{-3}% for fields from 10 to 1 oe. Accuracy of absolute field measurements, using the ДФПГ (DFPG) radical, is equal to 5×10^{-3}%; it is determined by the accuracy of measuring gyromagnetic ratio of electron in the given substance.

[Abstracter's note: Complete translation]

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30184

S/079/61/031/011/004/015
D202/D305

5.3610

AUTHORS: Matevosyan, R. O., Ikrina, M. A. and Chirkov, A. K.

TITLE: A study of the free radicals in the hydrazine series. V. Synthesis of α,α-diphenyl-β-2,6-dinitro-phenyl-hydrazine and α,α-diphenyl-β-2,4-dinitro-phenyl-hydrazyl, and an investigation of their chemical and physical properties

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 11, 1961, 3539-3544

TEXT: A continuation of previous investigation aimed at synthesizing 2 new free radicals and investigating their properties. The starting products α,α-diphenyl-hydrazine (cpd. VII) and 2,6-dinitro-chlorobenzene were obtained by known methods, but in 60 - 70% yields. (Cpd. VIII) α,α-diphenyl-β-2,6-dinitrophenyl-hydrazine was obtained from 0.05 g mol of compound VII, 0.025 g mol of 2,6-dinitro-chlorobenzene and 0.01 g mol of calcined $NaHCO_3$ by grinding, moistening with alcohol and fusion at 105 - 110°C for 2 hours; after digesting with concentrated HCl, the product

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A study of the...

was extracted with ether. Recrystallization from alcohol produced orange-red crystal, m.p. 140 - 141°C; yield -- 30 - 35%. (Cpd. IX) α,α-diphenyl-β-2,4-dinitro phenyl-hydrazine was obtained by the same method in 30 - 35% yield; the m.p. was 120 - 121°C. (Cpd. V) α,α-diphenyl-β-2,6-dinitro-phenyl-hydrazyl was obtained from a solution of 0.005 g mol of hydrazine VIII in dry $CHCl_3$, 0.004 g mol of anhydrous Na_2SO_4 and an excess of PbO_2. The mixture was shaken for 2 hours and the resulting deep-violet liquid was separated from the residue, and chromatographed on Al_2O_3. $CHCl_3$ was distilled off in vacuo, the precipitate filtered and dried in vacuo for 4 - 5 hours. The free radical formed black crystals, m.p. 169 - 170° (with decomp.), the yield being 65 - 70%. (Cpd. VI) α,α-diphenyl-β-2,4-dinitrophenyl-hydrazyl was obtained by the same method, but could not be crystallized. The results prove that radical V is much more stable than radical VI which is thought to be due to the screening of the β-nitrogen atom by $-NO_2$ groups in the 2,6-positions of the β-phenyl ring. In order to compare physico-chemical properties

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S/079/61/031/011/004/025
D202/D305

of radical V with those of previously obtained radical I—diphenyl-picryl-hydrazyl—the authors studied the dehydration reaction of diphenylamine with radical V. It was found that, while the radical I markedly reacted with diphenylamine, the radical V was completely inactive. The authors express their gratitude to Professor I. Ya. Postovskiy for his attention to the present work. There are 1 table and 13 references: 7 Soviet-bloc and 6 non-Soviet-bloc. The reference to the English-language publication reads as follows: C. Kikuchi, V. W. Cohen, Phys. Revs. 93, 394 (1954).

SUBMITTED: December 27, 1960

Card 3/3

MATEVOSYAN, R.A.; GABRIEL'YAN, Ye.G.; CHIRKOV, A.K.; POSTOVSKIY, I.Ya.

Comparative dehydrogenating capacity of some diarylpicrylhydrazyl radicals. Dokl. AN SSSR 137 no. 1:99-101 Mr-Ap '61. (MIRA 14:2)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova. Predstavleno akademikom M.M. Shemyakinym.
(Dehydrogenation) (Radicals (Chemistry))

33928
S/079/62/032/001/005/016
D226/D302

11.1270
11.1510

AUTHORS: Matevosyan, R.O., and Chirkhov, A.K.

TITLE: Investigating properties of free radical hydrazine derivatives. VI. Synthesis and properties of α-phenyl-α-fluorenyl-β-picrylhydrazyl

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 1, 1962, 245-250

TEXT: The authors described in previous publications (Ref. 1: ZhOKh, 30, 1960, 3186; Ref. 2: ZhOKh, 29, 1960, 3106) the synthesis of α,α-diphenyl-β-picrylhydrazyl (I), N-carbazylpicrylaminyl (II) and α-diphenyl-α-phenyl-β-picrylhydrazyl (III) free radicals and have shown that in its crystalline form (II) exhibits to the greatest extent electron-exchange reactions whilst (III) exhibits then least probably because of the coplanar structure of the carbazyl group in (II) as opposed to the non-coplanar structure of the diphenyl group in (III). In order to study the effect of spatial arrangement on the exchange reactions of free radicals the authors prepared a co-planar analogue of (III), not previously described in the literatu-

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Investigating properties of free ...

re viz., α-fluorenyl-α-pheynl-β-picryl-hydrazyl (IV). The details of synthesis are given. From the line widths obtained from paramagnetic electron resonance spectra for all these radicals, it was found that IV exhibits electron exchange reactions to the least extent. The authors conclude that exchange reactions in crystalline free radicals depend on their spatial configuration. Electron exchange reactions are of two kinds: Intra- and intermolecular. The more localized the free valency electron cloud, the less stable is the free radical, the lesser is the extent of intra-molecular electron exchange reactions and the greater the extent of inter-molecular electron exchange reactions. The reactivity of radicals (I)-(IV) was assessed on the basis of their reactions with diphenylamine which can be represented as follows:

$$\geq N - \overset{\circ}{N} + HN\begin{matrix}\diagup C_6H_5 \\ \diagdown C_6H_5\end{matrix} \longrightarrow \geq N - \underset{H}{N} + \overset{\circ}{N}\begin{matrix}\diagup C_6H_5 \\ \diagdown C_6H_5\end{matrix}$$

Their reactivity was found to be in the order (II) $>$ (I) $>$ (III) $>$ $>$ (IV). The instability of the carbazyl radicals (II) and their

Investigating properties of free ...

considerable electron exchange reactions are related to the localization of the free electron cloud on the β-nitrogen atom which in turn depends on electron density on the α-nitrogen atom. The more closely bound is the electron cloud on the α-nitrogen atom to the π-electrons of the benzene rings, the more localized becomes the unpaired electron cloud on the β-nitrogen and, as a result, the more unstable is the free radical and the greater the extent of electron exchange reactions. In the experimental part of the paper the authors describe methods of preparation and the properties of various amino derivatives of fluorene. There are 2 figures, 2 tables and 4 Soviet-bloc references.

ASSOCIATION: Ural'skiy poltekhnicheskiy institut imeni S.M. Kirova (Ural Polytechnic Institute im. S.M. Kirov)

SUBMITTED: January 13, 1961

Card 3/3

33929
S/079/62/032/001/006/016
D213/D302

11.1510
11.1270

AUTHORS: Matveosyan, R.O., and Chirkov, A.K.

TITLE: Investigating free radicals derived from hydrazine VII. Synthesis of α-(4-methoxyphenyl)-α-phenyl-β-picryl-hydrazyl and α-(4-methoxydiphenyl)-α-phenyl-β-picryl hydrazyl and the study of their chemical and physical properties

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 1, 1962, 251-256

TEXT: The authors describe the preparation of the above-mentioned radicals, whose stability was measured by chemical and physical means. The relationship between structure and reactivity of hydrazyl radicals is explained by the degree of interaction between the unpaired electron of N_β and the lone pair of N_α which, in turn, depends on the density of the electron cloud on N_α, i.e. on the electron attracting or repelling properties of the substituents on N_α. The greater the electron density on N_α, the greater the delocaliza-

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tion of the unpaired electron and the greater is the stability of the radical. This paper is a continuation of a previous one, where the substituents on N_α were phenyl and diphenyl. This time, to increase electron density on N_α, p-methoxy groups are introduced. The synthesized hydrazyls were blue in solution, and on conversion to hydrazines turned red. This property was utilized in measuring their stability by a study of the kinetics of their reaction with diphenylamine giving the corresponding hydrazines and a diphenylamine radical. The rate of reaction was measured colorimetrically, in a benzene solution, with free radical concentrations being 6×10^{-2} m mole/l and that of diphenylamine ten times greater. To eliminate the possibility of interaction between free radicals and the solvent, a blank was made without adding diphenylamine, showing the absence of interaction with the solvent. The kinetic measurements indicated that the methoxylated compounds were more stable than the unmethoxylated ones, since their reactivity was much lower. This proved the postulated relationship between structure and reactivity to be valid. Electron paramagnetic resonance data are presented supporting the kinetic evidences. There are 1 figure, 2 tables and 2

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S/079/62/032/001/006/016
D213/D302

Investigating free radicals derived ...

Soviet-bloc references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Urals Polytechnic Institute)

SUBMITTED: January 26, 1961

Card 3/3

MATEVOSYAN, R.O.; KHOLEVINSKAYA, L.V.; CHIRKOV, A.K.

Studies in the chemistry of free radicals of the hydrazine series. Interaction of α-α-diphenyl-β-picrylhydrazyl with trichloroacetic acid and a series of organic bases. Zhur. org. khim. 1 no.9: 1703-1704 S '65. (MIRA 18:12)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.
Submitted May 28, 1964.

CHIRKOV, A. M.

"Clinical Treatment of Psychic Disturbances in Cases of Chronic Intoxication with Small Doses of Mercury." Sub 23 Dec 47, Central Inst for the Advanced Training of Physicians

Dissertations Presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

CHIRKOV, A. M.

Psycho-patholigic syndromes in chronic mercury poisoning. Nevropat. psikhiat., Moskva 19:3, May-June 50. p. 45-9

1. Of the Clinic of Exogenic Forms (Scientific Director—Prof. I. G. Ravkin), Central Scientific-Research Institute of Psychiatry (Director—P. B. Posvyanskiy) of the Ministry of Public Health RSFSR.

CLML 19, 5, Nov., 1950

CHIRKOV, Aleksandr Moiseyevich, kand. med. nauk; GOLUBYKH, Lev Ivanovich; AVERBAKH, M.M., red.; SACHKOVA, A.I., tekhn. red.

[What neuroses are] Chto takoe nevrozy. Moskva, Gos. izd-vo med. lit-ry, 1956. 71 p. (MIRA 11:7)

(NEUROSES)

CHIRKOV, A.M.

"Chung hua shingting t'ingshengk'uo cha-chi" (Chinese journal of neuropathology and psychiatry), ed. Shih Ying-k'uei, published by "Public Health", Peking; a survey for 1955-1957. Zhur. nevr. i psikh 58 no.12:1501-1504 '58. (MIRA 12:1)

(ILLNESS--PERIODICALS)
(CHINESE PERIODICALS)

CHIRKOV, A.M., kand.med.nauk

Role of brain injury, infections, and intoxications in the genesis of cerebral atherosclerosis with mental disorders. Report No.1. Trudy Gos. nauchno-issl. inst. psikh. 22:75-87 '60. (MIRA 15:1)

1. Klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR.
(CEREBRAL ARTERIOSCLEROSIS) (MENTAL ILLNESS)

CHIRKOV, A.M., kand.med.nauk

Classification of atherosclerotic diseases of the brain and the organization of therapeutic aid. Trudy Gos.nauch-issl. inst.psikh. 25:396-406 '61. (MIRA 15:12)

1. Klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR.
(CEREBRAL ARTERIOSCLEROSIS)

CHIRKOV, A.M., kand.med.nauk

Organization principles of psychoneurological aid to patients with cerebral atherosclerosis with neurospychic disorders and other vascular diseases. Trudy 1-go MMI 21:547-555'63.
(MIRA 16:9)

1. Institut psikhiatrii Ministerstva zdravookhraneniya RSFSR (dir. - prof. D.D.Fedotov) i kafedra psikhiatrii (zav. - prof. V.M.Banshchikov) 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(CEREBRAL ARTERIOSCLEROSIS) (CEREBROVASCULAR DISEASE)

SHTEYNBERG, G.S.; RIVOSH, L.A.; CHIRKOV, A.M.

Magnetic survey in the region of the Avacha group of volcanoes in Kamchatka. Geol.i geofiz. no.2:101-108 '62. (MIRA 15:4)

1. Kamchatskaya geologo-geofizicheskaya observatoriya Sibirskogo otdeleniya AN SSSR, Petropavlovsk-Kamchatskiy.
(Kamchatka--Geological surveys)
(Kamchatka--Magnetism, Terrestrial)

S/169/62/000/009/044/120
D228/D307

AUTHORS: Shteynberg, G. S., Rivosh, L. A. and Chirkov, A. M.

TITLE: Magnetic survey in the vicinity of the Avachinskaya group of volcanos in Kamchatka

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 37, abstract 9A247 (Geologiya i geofizika, no. 2, 1962, 101-108)

TEXT: A magnetic survey, which included airborne (ΔT) and ground (Δz) magnetic observations, was made in 1959-1960 near the Avachinskaya group of volcanos. The procedure is described, and the results of the airborne and ground magnetic surveys are analyzed in detail. The authors also give a map of the ΔT graphs for the area of the Avachinskaya group of volcanos, a picture of the anomalous field above the meridional fault near the Karymskiy Volcano, and the Δz isodynamic lines on the Avachinskaya Volcano's active cone. Conclusions are drawn regarding the study area's geologico-tectonic structure. [Abstracter's note: Complete translation.]

Card 1/1

SHTEYNBERG, G.S.; RYNDIN, E.A.; CHIRKOV, A.M.

Study of the geomagnetic field on the Avacha vulcano. Geomag. i aer. 4 no.5:972-974 S-O '64. (MIRA 17:11)

1. Institut vulkanologii Sibirskogo otdeleniya AN SSSR.

KIRSANOV, I.T.; OGORODOV, N.V.; FEDOROV, M.V.; CHIRKOV, A.M.

State of the Karymskiy Volcano in 1960-1961 and the products of its eruption. Biul.vulk.sta. no.35:9-21 '64.
(MIRA 17:10)

ZUBIN, M.I.; FEDOROV, M.V.; CHIRKOV, A.M.; SHTEYNBERG, G.S.

Crater of the Avacha Volcano and its status in the summer of 1961. Biul. vulk. sta. no.36:24-36 '64. (MIRA 17:9)

KIRSANOV, I.T.; OGORODOV, N.V.; CHIRKOV, A.M.

Status of the Mutnovskiy and Gorelyy Volcanoes in the period from November, 1960 to June, 1961. Biul. vulk. sta. no.36: 39-47 '64. (MIRA 17:9)

RYNDIN, E.A.; CHIRKOV, A.M.; SHTEYNBERG, G.S.

Magnetic survey of the Avacha Volcano. Biul. vulk. sta. no.38:33-38 '64. (MIRA 18:3)

CHIRKOV, A.S., gornyy inzh.

Solving problems of opening strip mines using railroad haulage and with the help of electronic computers. Gor. zhur. no.2:51-54 F '65. (MIRA 18:4)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.

CHIRKOV, A. V. FD 135

USSR/Medicine - Dysentery

Card 1/1

Author : Chirkov, A. V.

Title : The significance of combining an agglutination reaction with rectoromanoscopic examination in the detection of patients suffering from chronic Flexner dysentery

Periodical : Zhur. mikrobiol. epid. i immun. 4, 49-52, Apr 1954

Abstract : Attempts to devise a dependable method for detecting persons suffering from chronic Flexner dysentery among workers in the food industries are described. Because of the large percentage of positive results obtained in agglutination reactions performed on groups of persons not suffering from dysentery, it was decided to combine the agglutination reaction test with a rectoromanoscopic examination. The results of these combined observations are presented on 4 charts. 7 Soviet references are cited.

Institution : The Sanitary-Epidemiological Station of the city of Engels (Chief Physician- Ye. Ya. Mikhaylova)

Submitted : April 20, 1953. Presented June 18, 1951 at a Scientific-Practical Conference of the Physicians of the city of Engels.

CHIRKOV, A.V.

Experiment in active detection of dysentery reconvalescents. Zhur. mikrobiol.epid.i immun. no.8:86-87 Ag '54. (MLRA 7:9)

1. Iz sanitarno-epidemiologicheskoy stantsii goroda Engel'sa
(DYSENTERY)

CHIRKOV, A. V.

"Production of Noiseless Gears for use in Repair", Stanki I Instrument, 14, No. 7-8, 1943

CHIRKOV, A.

Chirkov, A. - "On the calculations in establishments of the cellulose and paper industry," Bukhgalter. uchet, 1948, No. 12, p. 10-16.

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

CHIRKOV, A. V.

36198 Za uskoreniye oborachivayemosti oborotnykh sredstv. Bumazh. prom-st', 1949, No. 5, S. 22-28.

SO Letopsi' Zhrunal' nykh Statey, No. 49, 1949

CHIRKOV, A. V.

Analiz khoziaistvennoi deiatel'nosti tsellyu ozno-bumazhnykh predpriiatii [Analysis of the economic activity of wood pulp and paper enterprises] Moskva, Goslesbumizdat, 1953. 150 p.

SO: Monthly List of Russian Accessions, Vol. 6 No 10 January 1954

CHIRKOV, A. V.

Paper Industry

Problems of calculation in paper manufacture. Bum. prom. 28 no. 2, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

CHIRKOV, A.V., kandidat ekonomicheskikh nauk.

Production control problems in pulp and paper manufacture. Bum.prom. 28 no.8:27-28 Ag '53. (MLRA 6:7)
(Paper industry)

CHIRKOV, A.V.

Planning and accounting problems in plants operating on a business basis. Der.prom.4 no.7:26-27 Jl'55. (MLRA 8:10)

1. Leningradskaya lesotekhnicheskaya akademiya
(Match industry--Accounting)

CHIRKOV, A.V.

Raw material records and quality indexes in the hydrolysis industry. Gidrolis. i lesokhim. prom. 8 no.6:24-25 '55. (MLRA 9:1)

1.Leningradskaya lesotekhnicheskaya akademiya imeni S.M.Kirova.
(Hydrolysis)

CHIRKOV, A.V., kandidat ekonomicheskikh nauk.

Concerning the article "Cost analysis of pulp and paper mills."
Bum.prom. 30 no.12:26 D '55. (MLRA 9:3)
(Paper industry--Accounting) (Woodpulp industry--Accounting)

CHIRKOV, A.V.

Planning, accounting and evaluating the output of paper. Bum.prom.31 no.8:24 '56. (MLRA 9:10)

1.Dotsent Leningradskoy lesotekhnicheskoy akademii imeni S.M.Kirova.
(Paper industry--Accounting)

CHIRKOV, A.V.

Basic qualitative index of the operation of hydrolysis plants.
Gidroliz. i lesokhim. prom. 11 no.2:27-28 '58. (MIRA 11:3)

1. Leningradskaya lesotekhnicheskaya akademiya.
(Hydrolysis)

CHIRKOV, A.V.

Some shortcomings in technical literature. Gidroliz. i lesokhim. prom. 11 no.5:32 '58. (MIRA 11:9)

1. Leningradskaya lesotekhnicheskaya akademiya.
(Wood-using industries)

CHIRKOV, A.V., kand.ekon.nauk

Discussion of economic problems in the manual "Technology of woodpulp." Bum.prom. 33 no.11:31-32 N '58. (MIRA 13:8)
(Woodpulp)

22(1) SOV/3-59-4-10/42

AUTHORS: Kazakevich, D.M., Candidate of Economic Sciences; Larina, M.N.; Chirkov, A.V., Candidate of Economic Sciences, Docent; Slobodyanik, I.Ya., Candidate of Technical Sciences

TITLE: Our Readers Suggest

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 4, pp 33-34 (USSR)

ABSTRACT: In order to raise the quality of exercises on economic subjects, D.M. Kazakevich and M.N. Larina of the Tomsk Electromechanical Institute of RR Engineers suggest that some of the seminar exercises be conducted with the participation of plant engineers and economists. Such seminars were organized last year by the Chair of Political Economy of the Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute) at the plants "Sibelektromotor", "Manometr" and others. It is advisable for the vuz instructors and the workers of the scientific-research institutions to establish scientific collectives which will handle such problems. The economic chairs of the institutes of Novosibirsk, Tomsk and other Siberian vuz centers could participate in scientific researches on themes of the

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Our Readers Suggest

Institut ekonomiki i statistiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Economics and Statistics of the Siberian Branch of the AS USSR). Docent A.V. Chirkov of the Leningradskaya lesotekhnicheskaya akademiya imeni S.M. Kirova (Leningrad Forest Engineering Academy imeni S.M. Kirov) emphasizes the necessity of considerably reducing the time used in reviewing textbooks. It often takes 2 years to review and print a textbook. On some subjects, particularly on special technological and economic ones, it happens that similar textbooks appear at the same time and that the material and statistical data on the same subject disagree in various textbooks and sometimes even contradict each other. It is therefore suggested that economists or technologists be invited to participate in reviewing manuscripts. I.Ya. Slobodyanik of the Kiyevskiy inzhenerno-stroitel'nyy institut (Kiev Construction Engineering Institute) suggests that students be familiarized with the latest devices and equipment at exhibitions of advanced experience, large enterprises, etc. as it is practically impossible to have the vuz laboratories equipped with all the

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308820016-3"

Our Readers Suggest

latest technical devices. The author considers it desirable that the various exhibitions furnish the vuzes with copies of new posters and photographs of equipment, catalogues, models or motion pictures. Plants turning out new laboratory and productional equipment should be requested to supply the laboratories of the respective vuzes with specimens of such equipment.

Card 3/3

CHIRKOV, A.V., kand.ekon.nauk

"Repair and adjustment of equipment in woodworking enterprises" by I.I.Sheinov. Reviewed by A.V.Chirkov. Der.prom. 8 no.1:27 Ja '59. (MIRA 12:1)
(Woodworking machinery--Maintenance and repair) (Sheinov, I.I.)

CHIHKOV, Aleksandr Vasil'yevich; SUCHIL'NIKOV, N.G., red.; VALLAKH, T.G., red.izd-va; PROKOF'YEVA, L.N., tekhn.red.

[Analysis of the economic activity of woodpulp and paper mills] Analiz khoziaistvennoi deiatel'nosti tselliulozno-bumazhnykh predpriiatii. Izd.2., perer. i dop. Moskva, Goslesbumizdat, 1959. 193 p. (MIRA 12:9)
(Paper industry) (Woodpulp industry)

CHIRKOV, A.V.;

New manual. Gidroliz. i lesokhim prom. 12 no.7:31-32 '59 (MIRA 13:3)
(Wood-using industries)

CHIRKOV, A.V., kand.ekon.nauk

Pamphlet on the operation of up-to-date enterprises. Bum.prom. 34 no.10:30 O '59. (MIRA 13:2)
(Paper industry)

CHIRKOV, A.V., kand. ekon. nauk

Technical and economic advantages in the manufacture of new fibrous semiprocessed materials. Bum. prom. 34 no.11:21-22 N '59. (MIRA 13:3)
(Woodpulp)

CHIRKOV, A.V., kand.ekonom.nauk

"Prospective development and expansion of the raw materials supply for the woodpulp and paper industry," by Kh.I. Dzhalilov. Reviewed by A.V. Chirkov., Bum. prom. 36 no.8: 30-31 Ag '61. (MIRA 14:8)
(Paper industry) (Woodpulp industry)
(Dzhalilov, Kh.I.)

CHIRKOV, A.V., kand.ekonom.nauk

Simplified method of calculation is needed for the paper industry. Bum. prom. 36 no.10:22-23 O '61. (MIRA 15:1)
(Paper industry)

CHIRKOV, A.V., kand.ekonom.nauk

Keeping records and planning in the metric system will help the economy of supplies for the paper industry. Bum. prom. 36 no.11: 8-9 N '61. (MIRA 15:1)

(Paper industry—Accounting)

CHIRKOV, Aleksandr Vasil'yevich; BARSKIY, A.A., red.; MEL'NIKOVA, M.S., red. izd-va; BACHURINA, A.M., tekhn. red.

[Ways of reducing the production costs of furniture and other articles made of wood]Puti snizheniia sebestoimosti mebeli i drugikh izdelii iz drevesiny. Moskva, Goslesbumizdat, 1961. 115 p. (MIRA 15:10)
(Woodworking industries--Costs)

CHIRKOV, Aleksandr Vasil'yevich; PETROV, B.S., red.; KHOT'KOVA, Ye.S., red. izd-va; VDOVINA, V.M., tekhn. red.

[Business accounting within the plant in the woodpulp and paper enterprises] Vnutrizavodskii khoziaistvennyi raschet na tselliulozno-bumazhnykh predpriiatiiakh. Moskva, Goslesbumizdat, 1963. 173 p. (MIRA 16:6)
(Woodpulp industry--Accounting)

CHEKANOVA, Nina Ignat'yevna, agronom Geroy Sotsialisticheskogo Truda; KOSTROV, Petr Ivanovich; KOL'TSOV, A.D., nauchnyy red.; CHIRKOV, A.Ya., red.; BARANOVA, N.N., tekhn. red.

[Technology of cultivating forage beans]Tekhnologiia vozdelyvaniia kormovykh bobov, Moskva, Proftekhizdat, 1962. 41 p. (MIRA 16:2)

(Broad bean)

MEL'NIK, Viktor Danilovich; BOVSUNOVSKIY, Anton Ivanovich; KOZLOVSKIY, N.I., nauchnyy red.; CHIRKOV, A.Ya., red.; PEREDERIY, S.P., tekhn. red.

[New technology for growing sugar beets] Novaia tekhnologiia vozdelyvaniia sakharnoi svekly. Moskva, Proftekhizdat, 1962. 61 p. (MIRA 16:1)

1. Mekhanizator kolkhoza "Bol'shevik" Zhashkovskogo rayona Cherkasskoy oblasti (for Mel'nik).

(Zhashkov District—Sugar beets)

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AUTHOR: Kashuba, I. Ye.; Kozin, B. G.; Pasechnik, M. V.; Pucherov, N. N.; Chirko, V. I.

ORG: Institute of Physics, AN UkrSSR (Institut fiziki AN UkrSSR)

TITLE: Analysis of the elastic scattering of 6.9 MeV protons by Ni isotopes and the nuclear optical model

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ABSTRACT: The differential cross-sections and polarizations of 6.9 MeV protons, elastically scattered by Ni isotopes, were calculated on the basis of the optical model. It is shown that the model parameters giving the best agreement between theory and experiment differ significantly for various NI isotopes. An uncertainty exists in the choice of the depth and diffusion parameters b and W in the imaginary part of the potential for Wb = const. It is shown that the uncertainty in the choice of the optimal set of optical model parameters is significantly decreased if the analysis of the data on elastic scattering takes the angular dependence of the polarization as well as the differential cross-section into account. The authors thank the staff of the Institute of Cybernetics AN UkrSSR for making possible the calculations of the electronic computers as well as for assuring the operation of the machines. Orig. art. has: 3 figures, 7 formulas and 1 table. [Based on authors' Eng. abst.] [JPRS: 36,712]

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